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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,657	12/11/2003	Robert A. Pyles	PO-8027/MD-03-32	2177
157 7590 02/26/2008 BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205				
EXAMINER DANIELS, MATTHEW J				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/733,657

Applicant(s)

PYLES ET AL.

Examiner

MATTHEW J. DANIELS

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 24-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 November 2007 has been entered.

Claim Objections

2. The objection is withdrawn.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. **Claims 1, 20, and 27** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 15 of copending Application No. 10/733,111, now USPN 7175675. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims contain claims to a thermoplastic article selected from the group consisting of pellets and strands (instant Claim 20, Claim 1 of the '111 application), immersing or contacting the article with a treatment composition comprising a dye (an IR absorber or an optical brightener, instant Claim 1, is a "dye", alternatively see instant Claim 27), at least one carrier (instant Claim 1, when "m" is 1, the compound is the same as the '111 application), maintaining contact or immersion for sufficient time, and removing the article from the bath.

4. USPN 6749646 and USPN 6994735 have been considered for double patenting, but do not claim any diol in the treatment composition (see instant Claim 1, ingredient iv of the treatment composition). USPN 6949127 has been considered for double patenting, but is directed to a product. Applications 11/417,379 and 11/417,720 have also been considered for double patenting.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Note that the 10/733,111 application has the same inventive entity as this application, and is thus not “by another”.

6. **Claims 1-19 and 27** are rejected under 35 U.S.C. 102(e) as anticipated by Pyles (WO 03/083207). The applied reference has a common assignee/inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Additional rejections under 35 USC 102(e) over USPN 6733543 or USPN 6949127 are deemed to be cumulative over this rejection because all three documents claim domestic priority to 10/106,788 having a filing date of 26 March 2002.

As to Claim 1, Pyles teaches a method of treating a plastic article comprising:

- (a) providing an article (inherent)
- (b) contacting the article with the claimed composition (page 5, lines 1-35)
- (c) maintaining contact to form a treated article (page 9, line 17)
- (d) removing (inherent)

As to Claim 2, see page 9, line 6.

As to Claims 3-4, see page 9, line 6.

As to Claim 5, see page 9, line 13.

As to Claims 6-7, see page 5, lines 1-35.

As to Claims 8-13, see pages 5 and 7.

As to Claims 14-19, see page 5, line 34 and page 3.

As to Claim 27, see page 6.

Ordinarily, prior art rejections are confined strictly to the best available art. However, exceptions, however, may properly be made where the most pertinent reference seems likely to be antedated by a declaration. See MPEP 706.02(I). In this case, the reference and the application share at least one inventor and appear to have a common assignee, and the reference appears likely to be antedated. The following rejections are also presented to expedite prosecution.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 3-8, 10-12, 13, 15-19, 22** are rejected under 35 U.S.C. 103(a) as obvious over Kawashima (USPN 5015523). **As to Claim 1**, Kawashima teaches a method of treating a plastic article comprising:

- (a) providing a plastic article that is a thermoset or thermoplastic (5:55-7:16)
- (b) contacting at least a portion of the surface of the plastic article with a treatment composition comprising:
 - (i) an additive (7:59-8:28)
 - (ii) water (9:60-62)
 - (iii) at least one carrier (9:64, 8:6-24)
 - (iv) a diol (9:67)
- (c) maintaining the plastic article in contact with the treatment composition for a period of time sufficient to form a treated article (8:39)
- (d) removing the treated article from contact with the treatment composition

Kawashima does not explicitly teach an additive that is a UV stabilizer, an optical brightener, a mold release agent, an antistatic agent, a thermal stabilizer, and IR absorber, or an antimicrobial agent. However, Kawashima teaches a variety of additives that would inherently function as the additives listed above. For example, fluorine surfactant (8:26) would perform the function of a mold release agent. Many of the polymers (7:59-68) would inherently absorb IR. And the UV absorber (8:1-5) would perform the function of a UV stabilizer and/or IR absorber.

Kawashima is silent to the claimed mixture now recited in step (d). However, Kawashima teaches that the adhesion properties vary depending on the combination of the primer polymer and the solvent (8:32-37). Additionally, the solution controls viscosity, evaporation rate, and weatherability by including components such as n-butyl Cellosolve and glycols (8:6-24). Therefore, because the ingredients of the solution control viscosity,

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evaporation, and weatherability, it is submitted that the various amounts of these components represent result effective variables which should be optimized to achieve these results. One of ordinary skill in the art would have found it obvious to optimize the amounts of these components and arrive at the claimed invention to control the viscosity, evaporation and weatherability. While Kawashima teaches in one preferred embodiment (9:60-68) that the coating solution may contain 60-90% cellosolve and 0-10% ethylene glycol, there appears to be no teaching away from mixtures outside this preferred range. **As to Claims 3-5**, Kawashima dips and sprays lenses (8:39) of polyalkyl methacrylate (1:35, PMMA is a polyalkyl methacrylate). **As to Claims 6, 12, and 13**, Kawashima teaches at least one of the claimed substances (8:6-24). **As to Claim 8**, Kawashima teaches at least an anionic or non-ionic surfactant (7:66 and 8:25-28). **As to Claim 15**, Kawashima teaches polycarbonates which would be either thermoplastic aliphatic or aromatic polycarbonates (5:62-6:3). **As to Claims 16-19**, see lenses from diethylene glycol bisallyl carbonate (5:20, 6:1). **As to Claim 22**, Kawashima teaches a photochromic dye applied to the treated plastic article (24:30-45). **As to Claim 7**, Kawashima teaches a carrier which may be n-butyl Cellosolve, and it is the Examiner's position that this disclosed compound reads on the claimed n-butyl (R1) and H (R2). However, in the alternative, Kawashima clearly teaches a wide range of compounds that would suggest the claimed species (8:6-24). **As to Claims 10 and 11**, Kawashima teaches diethylene glycol (7:47-50), and in the alternative that this cannot be considered a diol by its incorporation with acrylates or methacrylates (7:46-47), Kawashima clearly teaches ethylene glycol (8:10) which would suggest other similar glycols.

8. **Claims 2 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523). Kawashima teaches the subject matter of Claim 1 above under 35 USC 103(a). **As to Claim 2**, Kawashima discloses the coating solution maintained at a temperature of 20 C (68 F) (21:40-45), which is substantially room temperature. The claimed 25 C (77 F) is also at substantially room temperature, and would have been prima facie obvious. Alternatively, Kawashima discloses that a temperature of 60 C is required to semi-cure the coating (21:45-50), and the ordinary artisan would have recognized that any temperature below the curing temperature could be used. **As to Claim 9**, although silent to the particular amount of surfactant, Kawashima clearly teaches that the surfactant should be used in an amount sufficient to reduce surface tension and obtain a smooth coating surface (8:24-28). The particular amount of surfactant therefore represents a result effective variable that it would have been obvious to optimize. See MPEP 2144.05 II and *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).
9. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Ono (USPN 5914193). Kawashima teaches the subject matter of Claim 1 above under 35 USC 103(a). **As to Claim 14**, Kawashima appears to be silent to the plastic article containing the claimed substances or the article having a dye applied prior to treatment. However, Ono teaches a lens having a photochromic dye embedded in the lens or coated on top (2:30-48). Ono also applies a coating over top of the photochromic material (21:1-4). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Ono into that of Kawashima because it is obviously desirable to have photochromic dyes to shield the wearer's eyes from sunlight.

10. **Claims 20, 21, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Hurley (USPN 5846607). Kawashima teaches the subject matter of Claim 1 above under 35 USC 103(a). **As to Claims 20 and 21**, the Examiner asserts that a lens (Kawashima) could fulfill the limitation drawn to a pellet. However, in the alternative, Hurley teaches that it is known to provide an additive coating comprising a pigment onto thermoplastic pellets (4:14-20), and to subsequently to melt the treated pellet to form a molten composition and introducing the molten composition into a mold (these aspects are inherent in injection molding, 11:7). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Hurley into that of Kawashima because doing so would (1) allow incorporation of the pigments or other materials into the body of a product and (2) eliminate defects such as inhomogeneity which are especially apparent when color is avoided (3:57-61). **As to Claim 27**, Hurley teaches dyes (7:1-8) which would fulfill the claimed condition.

11. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Daughenbaugh (USPN 6506864). Kawashima teaches the subject matter of Claim 1 above under 35 USC 103(a). **As to Claim 24**, Kawashima teaches contacting the composition with a filter in order to isolate a substantially additive-free liquid (water). Kawashima appears to be silent to (a) the particular order of adding the additive and filtering and (b) the activated carbon. Daughenbaugh teaches that (b) it is known to filter through activated carbon (16:35-37) and rearrangement of the order of steps is generally considered to be prima

facie obvious in the absence of unexpected results. Here, it would have been obvious to add the additive after filtering in order to avoid filtering out the additive.

12. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Daughenbaugh (USPN 6506864). Kawashima teaches the subject matter of Claim 1 above under 35 USC 103(a). **As to Claim 25**, Kawashima teaches preparation of a mixture of water, carrier, and diol (columns 7-9), but appears to be silent to the introducing of the additive into a filter and passing the mixture over the additive through the filter. However, firstly the claimed order of steps appears to be met by a rearrangement in the order of steps of Kawashima. Secondly, the claimed method of applying an additive is taught by Johnson (USPN 2302552). Johnson provides specifically a filter with an impregnated addition agent which is absorbed into the fluid (page 1, left column, lines 37-55). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Daughenbaugh into that of Kawashima in order to provide an effective additive concentration to a fluid particularly in cases where the additive is only slightly soluble in the fluid (page 1, left, lines 37-55), and in order to avoid precipitated amounts of additive.

13. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Dusenbury (USPN 3045315). Kawashima teaches the subject matter of Claim 1 above under 35 USC 103(a). **As to Claim 26**, Kawashima appears to be silent to the claimed immersion tank, but Kawashima does teach immersion (8:39). Dusenbury teaches that it is known to immerse articles in a bath where the treatment composition is introduced into

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the immersion tank through a plate having a plurality of perforations (Figure). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Dusenbury into that of Kawashima in order to maintain a constant temperature and liquid level (1:10-52).

14. **Claim 28** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Brown (USPN 4977029). Kawashima teaches the subject matter of Claim 1 above under 35 USC 103(a). **As to Claim 28**, Kawashima appears to be silent to the rinsing of the treated article. However, rinsing of lenses in water is known. See Brown, 4:42-48. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Brown into that of Kawashima in order to remove additional materials, dust, any solvents in the coating, and to clean the coating before any additional treatments.

Response to Arguments

15. Applicant's arguments filed 24 September 2007 have been fully considered. The arguments appear to be on the following grounds:

a) The mold release agent is a lubricant that is applied to a mold surface to facilitate release of the molded part, and a surfactant refers to a compound that alters the surface tension of a liquid in which it is dissolved, and thereby improves wetting. The Examiner has not met the duty to prove that which he perceives to be an overlap, and it is not up to the Applicants to prove the

negative. The Examiner's assertion that a surfactant is interpreted to provide the function of a mold release agent is unsupported and lacks merit.

b) The Examiner's position that the presently claimed "IR absorber" or "optical brightener" are claimed as "dye" in USPN 7175675 is incorrect, and the Examiner has not met the burden to produce evidence. Thus, this obviousness-type double patenting rejection is clearly erroneous.

c) With regard to the 102(e) rejection over Pyles (WO 03/083207), a dye does not describe an IR absorber or optical brightener.

d) Kawashima disclosed a coated lens. The inventive method requires the claimed carrier in a particular amount.

16. Response

a) The obviousness-type double patenting rejection over USPN 6949127 is withdrawn in view of the different statutory classes of invention and the arguments on pages 8 and 9 of the 24 September 2007 reply.

b) Applicants appear to argue that the IR absorber or optical brightener fall outside the scope of the 7175675 Patent, however, it may be informative to also consider Claim 15 of the 7175675 Patent, which recites "said dye bath further comprises at least one of, UV stabilizers, optical brighteners, mold release agents, antistatic agents, thermal stabilizers, IR absorbers and antimicrobial agents." These substances are, therefore, within the scope of the dye bath of Claim 1 of the 7175675 Patent. By their explicit recitation in Claim 15 of the '675 Patent, it is submitted that the Examiner has met any burden necessary to maintain this obviousness-type double patenting rejection.

c) A dye or tint filters transmitted light. Although not disclosed to be the direct objective of the Pyles process, it is submitted that absorption of some IR would be inherent. It is noted that any and all information regarding the absorption spectra of the dyes and tints recited on pages 5 and 6 of the Pyles publication (WO 03/083207) is now material to patentability. Additionally, the WO 03/083207 document cites to "The Colour Index", 3rd Edition, published jointly by the Society of Dyes and Colors and the American Association of Textile Chemists and Colorists (1971) at page 6, lines 3-5, which may also be material to patentability.

Additionally, please consider Rule (USPN 4481314) which states "The novel infrared absorbent compounds of this invention comprise anthraquinone..." (1:21-23).

d) Kawashima teaches that the particular components of the primer solution are added for particular reasons, such as to control viscosity, evaporation rate, and weatherability. See 8:6-10. In view of this teaching, it is submitted that their particular ratio is one that is optimizable. One would have adjusted the amount of the various components to achieve a desirable viscosity, evaporation, and weatherability. The ranges disclosed by Kawashima and cited by Applicants arguments are merely preferred embodiments.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. DANIELS whose telephone number is (571)272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew J. Daniels/
Examiner, Art Unit 1791
2/19/08

Application Number**Application/Control No.**

10/733,657

**Applicant(s)/Patent under
Reexamination**

PYLES ET AL.

Examiner

MATTHEW J. DANIELS

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